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### **Health-seeking behaviour and the health system response**

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## **Preface**

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## Introduction and objectives of the paper

With the primary health care (PHC) approach of the late 1970s, studies on community perspectives and human behaviour experienced a real boom. The focus on social sciences was promoted by the UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR). Early studies funded by the Social and Economic Research (SER) component of TDR contributed much to the increasing emphasis on socio-cultural and socio-economic aspects. Special journal issues in the early 1990s presented collections of papers on behavioural and economic research on malaria (Sornmani & Fungladda, 1991; Gomes & Litsios, 1993). WHO/TDR workshops on qualitative research methods helped to shape the approaches of health-seeking behaviour studies in tropical disease research (Kikwawila Study Group, 1994 and 1995; TDR, 2002a; TDR 2002b).

Health-seeking behaviour studies acknowledge that health control tools, where they exist, remain greatly under or inadequately used. Understanding human behaviour is prerequisite to change behaviour and improve health practices. Experts in health interventions and health policy became increasingly aware of human behavioural factors in quality health care provision. In order to respond to community perspectives and needs, health systems need to adapt their strategies, taking into account the findings from behavioural studies.

In this paper, we portray health-seeking behaviour and health system response. The first part deals with health-seeking behavioural studies. Rather than revising the results from the broad body of literature, we opted to present various models and approaches in health behaviour research, and provide relevant examples to illustrate them. This permits us to discuss the use of different approaches, showing their advantages and limitations. The presentation is not a chronological order of how these approaches have been developed, but rather follows a logic from 'simple' to 'complex', showing how factors have been added, replaced and reformulated in different approaches. The theoretical underpinnings are taken from cultural epidemiology, anthropology, social psychology, medical geography, and social economy.

In the second part, we describe health system responses, as they have been applied in various settings throughout Africa, and link them to the different approaches presented in part I.

## Part I: Approaches to health-seeking behaviour

### 1. KAP surveys

Knowledge, attitudes and practices (KAP) surveys are possibly the most frequently used studies in health-seeking behaviour research. **Knowledge** is usually assessed in order to see how far community knowledge corresponds to biomedical concepts. Typical questions include knowledge about causes and symptoms of the illness under study. People's reported knowledge which deviates from biomedical concepts is usually termed 'beliefs' (for a well elaborated critique see Good, 1994). This distinction between 'knowledge' and 'beliefs' markedly deviates from the use of terms in psycho-social theory where 'beliefs' have a much broader meaning and include also beliefs

concerning perceptions about oneself. Downie and colleagues (1998) mention the illustrative example where the belief that 'I'm not good at sports' may restrict a person's readiness to engage in health exercise. Also beliefs about illness severity and susceptibility are seldom enquired.

Enquiry about other types of knowledge tends to be highly neglected in KAP studies. Very little information is sought on knowledge about the health system (access, referrals, opening hours, cost-sharing schemes etc.).

**Attitudes** form a more complicated issue, and in fact, despite their explicit inclusion in the study type, they are scarcely accounted for in KAP surveys. Attitude has been defined by Ribeaux and Poppleton (1978) as "a learned predisposition to think, feel and act in a particular way towards a given object or class of objects". As such, attitudes result from a complex interaction of beliefs, feelings, and values. They are important in designing health promotion campaigns which aim to change attitudes, e.g. attitudes towards condom use for prevention of AIDS. Attitudes may be inferred from a variety of statements and answers, but direct asking is usually problematic since people often respond in terms of what they think is the 'correct' answer. In particular attitudes towards traditional medicine might be hidden. In a survey, attitudes are therefore not easy to obtain. However, attitudes are central to understand behaviour, an element which is better acknowledged in cognitive models (see below).

Questions related to **Practices** in KAP surveys usually enquire about the use of preventive measures or different health care options. Normally, hypothetical questions are asked (what do you do if your child is ill?). They therefore hardly permit statements about actual practices. Rather, they yield information on people's normative behaviours or on what they know should be done (or they expect the interviewer wants to hear). In this sense, they check well on people's knowledge about practices, as heard in educational campaigns for example. However, special caution must be given to deductions from KAP survey data about *explaining* health-seeking behaviour (Yoder, 1997).

Above all, KAP surveys yield highly descriptive data, without providing an explanation for *why* people do what they do. Unfortunately, many investigators who use KAP studies do use them, implicitly or explicitly, to explain health-seeking behaviour. Their studies are based on the underlying assumption that there is a direct relationship between knowledge and action. They assume that by changing knowledge, behaviour is automatically changed as well. To give an example, one might expect that if people *recognise* the signs and symptoms of let's say tuberculosis and if they *know* that TB can be treated by antibiotic drug regimens, they will *act* accordingly and attend a health facility. That this is overtly over-simplistic becomes clear if one considers that there are many other factors which influence health-seeking behaviour. Although knowledge about an illness may be high, illness recognition during an actual episode is much less clear. In the example of TB, the typical symptom of incessant coughing leaves open a variety of other, less serious illness interpretations. Also not considered are motivational factors and stigma which may influence health-seeking behaviour. Neglected are other factors like treatment expectations, satisfaction with health care services, decision-making for health care, and external barriers (e.g. financial constraints, accessibility of health services). All this makes clear that knowledge is just one element in a broad array of factors which determine health-seeking behaviour (for a critique of KAP studies, see also Nichter, 1993).

Having mentioned the limitations of KAP surveys, it must be acknowledged that there are important advantages. On the whole, KAP surveys are very useful for assessing distribution of community knowledge in large-scale projects, e.g. national surveys, and for evaluating changes in knowledge after education and media campaigns. They permit rapid assessments, yielding quantitative data, and are therefore a cheap way to gain quick insights into main knowledge data. Moreover, they are relatively easy to carry out, and with some basic training in interview techniques, any public health specialist can design a questionnaire and undertake a KAP survey. However, the superficial and very knowledge oriented data they provide can clearly make them useful only as a part of an overall research strategy for studying health-seeking behaviour (Lane, 1997).

## **2. Focused ethnographic studies (FES) and rapid assessments**

As a response to the limitations of KAP studies and their misuse for explaining health behaviour, anthropologists plead for the use of ethnographic studies. Traditional ethnographies carried out by anthropologists had, however, one big limitation: time. To describe culture, anthropologists usually spent years in the field, learning the language of the study communities, and living with them for long periods of time. Furthermore, their sophisticated language and their aim to contribute to advances in anthropological theory hardly matched with the expectations of public health specialists and epidemiologists. Already in the 1980s, Foster (1987) noted that one of the problems in behavioural research was the failure “to keep research simple” (p. 713) and criticised the tendency of many social science researchers to be so “keen on conveying an impression of research sophistication that they overlook entirely the need to address the question of the ends for which the research is carried out” (p.714).

A compromise was sought to bridge the different disciplines in order to produce a more meaningful comprehension of community perspectives which helps understanding of health behaviour. In a collaborative work of applied anthropologists and public health specialists, study guidelines were designed which combined anthropological theory and techniques with rapid, focused data collection aimed at yielding clear and comprehensive recommendations apt for implementation.

The classical examples of such study guidelines are the focused ethnographic studies (FES) developed for ARI programs (Gove & Peltó, 1994) and the rapid assessment manual for malaria (Agyepong *et al.*, 1995).

The primary aim of all the manuals which were developed and used is to identify local illness concepts and categories. The ‘emic’ concept became increasingly central in anthropology as applied to public health investigations. In its simplified use, following Harris (1979), ‘emic’ in public health works became synonymous with ‘the native view’ of illnesses as opposed to the ‘etic’ concepts of biomedicine or ‘health professionals’ view’. The use of ‘emic’ and ‘etic’ in this sense is not unproblematic, as it fails to take into account that biomedically-trained health professionals do not have the state-of-the-art biomedical knowledge, and their own ‘emic views’ of illnesses, and transmission of this knowledge to the population, are not considered. In public health studies, ‘emic’ studies come very close to investigate ‘lay beliefs’, as opposed to biomedical ‘knowledge’.

In contrast to KAP surveys, FES and rapid assessment studies are set to use a variety of techniques, with a particular emphasis on qualitative methods. As an important advancement, interviewees are not only confronted with biomedical and local illness

terms, but they are presented pictures or videos in order to “validate the relationship of illness terminology to observable signs” (Gove & Pelto, 1994). In hypothetical scenarios (also called ‘vignettes’), normative behaviour is enquired with regard to the illness under study and related illnesses. The collection of narratives about recent illness episodes and care-seeking also puts more emphasis on actual behaviour, thereby giving more freedom to interviewees to explain their constraints and decisions related to care-seeking.

The iterative research process is acknowledged. Rather than working with pre-established questionnaires and random samples, the flexibility of research is high and a continuous evaluation of findings and new orientations depending on results become central.

FES and rapid assessment studies are strongly influenced by Kleinman’s concept of ‘explanatory models’ (EMs). “EMs contain explanations of any or all of five issues: aetiology, onset of symptoms, pathophysiology, course of sickness (severity and type of sick role) and treatment. EMs are tied to specific systems of knowledge and values centred in the different social sectors and sub-sectors of the health care system” (Kleinman, 1986: 36).

With the systematisation of local illness categories, the overlapping between local and biomedical knowledge is explored. In particular, the ethnographer seeks to identify ‘folk illnesses’, i.e. locally recognised illnesses with their own cause, symptoms and treatment which do not correspond to biomedical nosology (Rubel, 1984; Helman, 1990). Possibly the most famous example of a ‘folk illness’ is *susto* in Latin America (Rubel, 1984), an illness characterised by anxiety which does not correspond to a biomedical illness category. ‘Folk illnesses’ also became well-known in studies of malaria: from all over Africa, investigators reported that in the local understanding, convulsions were not recognised as a possible severe manifestations of malaria, but rather attributed to ‘supernatural’ agents, requiring treatment by a traditional healer (see for example Bonnet, 1986; Mwenesi, 1993; Makemba *et al.*, 1996).

Futhermore, health care system features (e.g. poor performance of health services, lack of drugs etc.), economic factors, and decision-making power for health care within households have been identified through FES and rapid assessment studies as obstacles for adequate health-seeking behaviours explaining treatment delays.

On the whole, FES and rapid assessments manuals are potentially very valuable tools, and the central idea to relatively rapidly collect ethnographic data in order to guide health implementers and policy-makers is certainly a great step forward for better collaboration between anthropologists and public health specialists/epidemiologists. The different workshops held on qualitative methods have certainly fostered the mutual understanding of concepts, methods and contributions by different research disciplines.

The strength of FES and rapid assessment studies lies in the identification of illness categories, and impressively complex local illness classifications have received attention in project interventions. The findings were especially used in designing locally tailored IEC messages which took into consideration local illness terms (see Nichter, 1993:56).

Unfortunately, with the main emphasis on identifying knowledge gaps in local illness understanding, these studies go barely beyond cognitive aspects, and the importance of contextualising the findings in people’s real life situations is greatly undervalued.

### **3. From illness categories to logics**

The search for clear-cut categories has one major limitation in that it blends out the complex interactions of different knowledge sources in shaping local illness understanding. Categorising illnesses assumes an 'either-or' situation, for example an illness is either associated with natural or supernatural agents, which determines different treatment choice. However, several authors have pointed out that illnesses are not always exclusively classified into one or another category. Greenwood (1992) described how in the Moroccan illness classification of Prophetic and humoral medicine, certain illnesses ambiguously belonged to both categories, rendering search for treatment in the domain of uncertainty. In an attempt to classify local illnesses in an East Sepik society, Lewis (1975) found that a single cause could lead to different symptomatology and a same symptomatology could be provoked by different causes, hence making a classification of illnesses for understanding behaviour useless. Janzen, in his famous work 'The Quest for Therapy in Lower Zaire' (1978), brilliantly showed how in people's illness narratives, viruses and bacteria interact with witchcraft. One of his informants explained how a healthy body would let pass contaminated food without provoking negative effects, whereas in a bewitched body, the ill-causing agents of the same food would be retained and eventually penetrate into the blood. The melting of different concepts is also made explicit in the local understanding of malaria in south-eastern Tanzania. In our ethnographic study, we describe how malaria and witchcraft can be interrelated in illness interpretations (Hausmann-Muela *et al.*, 1998). Among the population, the belief that witchcraft can impede biomedical treatment from working or malaria parasites from being detected in the blood – it is said that witchcraft hides the parasites by putting a veil between the body and the outside – is widespread.

These examples show poignantly how concepts from different knowledge sources amalgamate and give rise to new, syncretistic interpretations, rather than how new knowledge would replace existing concepts. The logic of interacting concepts explains much of treatment-seeking behaviour, as becomes clear in the case of malaria and witchcraft. A bewitched person who suffers from malaria must seek treatment from a traditional healer who can remove the witchcraft prior to attending the hospital for malaria treatment. Typically, observed treatment sequences with alternating use of traditional and biomedical resources follow a logic of interpreting and re-interpreting illness, using merged concepts from biomedicine and local beliefs in witchcraft (Hausmann-Muela *et al.*, 1998).

### **4. Knowledge into practice: some limitations**

One of the major unresolved questions in health-seeking behaviour studies is how far knowledge actually determines practice. It is most common to assume, implicitly or explicitly, that changing knowledge entails behaviour change. Hence the vast body of literature that concludes with recommending the education of people about causes, symptoms and treatments of illnesses as the key factor for success in behavioural change. It is, however, also widely recognised that improving knowledge, for example with well designed IEC campaigns, will not automatically lead to improved health behaviour.

Obviously, this is because apart from knowledge, there are a range of other factors relevant for health-seeking behaviour: unavailability of health facilities, lack of drugs, lack of money to pay for preventive or treatment costs etc., as we will see in the sections

below. But there are two interesting points to consider in the relationship between knowledge and practice which are scarcely treated in the literature: the uncertainties of illness and non-reasoned behaviour.

Often, illness symptoms are diffuse and ambiguous, and illness course or treatment outcomes are unexpected. Facing uncertainty, people follow a trial and error search for relief and meaning (Whyte, 1997; Ryan, 1998). Under these circumstances, even good biomedical knowledge would not affect behaviour.

At the other extreme, a very clear symptomatology may automatically activate certain actions, without reasoning about the nature of illness and its appropriate treatment. A illustrative example is *degedege*, a locally recognised illness in Tanzania characterised by convulsions - which closely corresponds to severe malaria. In our study in Ifakara, we found that in the local understanding, *degedege* was commonly attributed to a big moth, itself called *degedege*. Although this belief was widespread, nearly all informants were also aware that *degedege* could be caused by malaria, when ‘the parasites go to the head’. Independent from the causal attribution, *degedege* was preferably treated traditionally, with herbal concoctions, elephant dung and urine. Paradoxically, even informants who understood *degedege* solely as a consequence of malaria, and denied causation by the moth, would apply traditional treatment, even though for malaria, biomedical treatment from the hospital was perceived to be the most adequate (Table 1). If they knew that *degedege* was caused by malaria, why then did they opt for traditional treatments, rather than taking the child straight to the hospital? To better explain the observed behaviour, we used Schütz’s concept of ‘recipe knowledge’ (see Berger & Luckmann, 1966). This knowledge is like a recipe book containing formulae for solving routine problems. The ‘recipe knowledge’ for treating an illness is, so to speak, a scheme for therapeutic action, meaning here a culturally learned and well-established repertoire of actions which provides guidance about what to do and when to do it. ‘Recipe knowledge’ has practical value and is largely unrelated with aetiological concepts and beliefs (Hausmann-Muela & Muela Ribera, 2003). It is not clear how influential ‘recipe knowledge’ and non-reasoned behaviour in general is in health-seeking behaviour, as this perspective is much neglected in behavioural studies.

<i>Degedege</i> causes N=220		<i>Degedege</i> treatment (1) N=220		<i>Degedege</i> treatment (2) Moth denied N=76		Malaria treatment N=220	
Malaria	97%	Antipyretics	10%	Antipyretics	17%	Antipyretics	75%
Moth	65%	Sponging	23%	Sponging	30%	Sponging	65%
Hot sun	27%	Chloroquine	2%	Chloroquine	1%	Chloroquine	24%
Spirits	8%	Herbal remed.	35%	Herbal remed.	22%	Herbal remed.	1%
		No treatment	17%	No treatment	14%	No treatment	2%
		Urinating	41%	Urinating	39%	Urinating	0%
		Towel for menstruation	12%	Towel for menstruation	2%	Towel for menstruation	0%
		Elephant dung	6%	Elephant dung	13%	Elephant dung	0%

Table 1: Home treatment for *degedege* and malaria. *Degedege* 1 includes all respondents. *Degedege* 2 only includes the respondents who exclusively related *degedege* to malaria.



## 5. Health seeking behaviour models

Health- and treatment-seeking behaviour models from social psychology, medical sociology and medical anthropology allow for considerable extension of the determinant factors for behaviour of KAP and FES studies.

In public health, probably the most utilised models from social psychology are the Health Belief Model, the Theory of Reasoned Action and its later development to the Theory of Planned Behaviour. Most known from medical sociology and medical anthropology are, respectively, the Health Care Utilization or Socio-Behavioural Model by Andersen and its diverse posterior variations, and the Decision Making Model. All models contain associations of variables which are considered relevant for explaining or predicting health-seeking behaviours.

On the whole, health-seeking behaviour models as applied to public health mostly serve as catalogues of relevant variables that need to be considered in research design, rather than as behavioural models themselves. The mainly statistical data obtained using these models permit the evaluation of the relative weight of different factors in health behaviour (use of preventive or therapeutic measures, choice between different health resources, non-compliance with treatment, or the consequences of behaviour for delayed care seeking). The principal objective is to identify problematic areas in order to intervene with specific health system strategies.

Very frequently, investigators adapt the models to the peculiarities of their research field or study area, or fuse various models, with the main aim to increase the repertoire of possible key factors rather than to achieve theoretical advancements.

### a) *The Health Belief Model (HBM)*

This is possibly the most known model in public health, and also the oldest one from social psychology, developed in the 1950s.

Figure 1 shows the HBM as presented by Sheeran and Abraham (1995). According to this version, action in the HBM is guided by:

(1) Beliefs about the impact of illness and its consequences (threat perception) which depend on:

- Perceived susceptibility, or the beliefs about how vulnerable a person considers him- or herself in relation to a certain illness or health problem.
- Perceived severity of illness or health problems and its consequences;

(2) Health motivation, or readiness to be concerned about health matters. (This factor has been included later in the HBM, in the 1970s).

(3) Beliefs about the consequences of health practices and about the possibilities and the effort to put them into practice. The behavioural evaluation depends on:

- Perceived benefits of preventive or therapeutic health practices;
- Perceived barriers, both material and psychological (for example 'will-power'), with regard to a certain health practice.

(4) Cues to action, which include different, internal and external factors, which influence action. For example, the nature and intensity (organic and symbolic) of

illness symptoms, mass media campaigns, advice from relevant other (family, friends, health staff, etc.).

(5) Beliefs and health motivation are conditioned by socio-demographic variables (class, age, gender, religion, etc.) and by the psychological characteristics of the interviewed person (personality, peer group pressure etc).

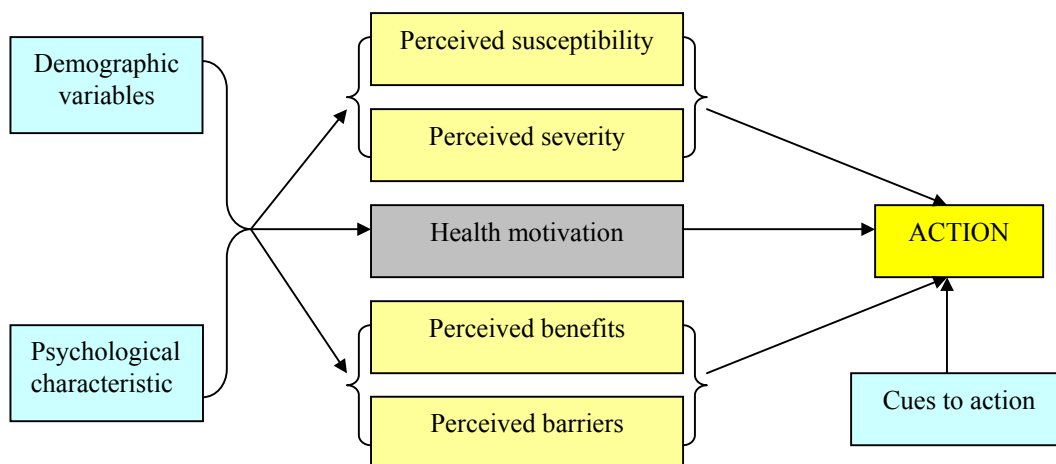


Figure 1: The Health Belief Model, Sheeran & Abraham, 1995

The socio-demographic variables, like in all other models, target groups to be established to which interventions can be directed. These interventions are mainly health promotion and centre around beliefs about disease threat and behavioural evaluation. These are the factors which are considered to be transformable through health education, in contrast to structural or cultural factors like poverty, religious norms etc.

While there is evidence that perceived susceptibility, severity, benefits and barriers of the HBM are relevant factors in health behaviour (Sheeran & Abraham, 1995), the HBM neglects further determinants which are present in other models, like previous experiences, advantages of mal-adaptive behaviour, behavioural intention, perceived control etc. (see following models).

Through the HBM interesting and highly relevant findings for health promotion can be determined. For example, for a disease like tuberculosis or AIDS which is associated with a specific group (the poor, homosexuals), persons who do not include themselves into these groups will hardly consider themselves vulnerable to the disease. This had particular implications for health messages about AIDS, which in later campaigns needed to be explicitly targeted to heterosexuals in order to create risk awareness. Studies which found that in endemic areas, malaria was not considered a severe disease (Mwenesi, 1993), or that mosquito-nets were not felt effective against malaria because ‘mosquitoes bite day and night’, are other examples which show the implications of perceived threat for health behaviour. The same applies to diarrhoea which was locally understood as a way of ‘cleansing’ the body, and vomiting, perceived to be a sign of relief, rather than of aggravation of disease (Hausmann-Muela *et al.*, 2002; Nyamongo, 2000).

b) *The Theory of Reasoned Action and the Theory of Planned Behaviour*

The Theory of Planned Behaviour (TPB, Ajzen) is an extension of the earlier Theory of Reasoned Action (TRA, Fishbein & Ajzen). Both have been developed and amply used in HIV/AIDS research.

They centre on factors which lead to a specific intention to act, or Behavioural Intention, which the TPB situates between the attitudes and behaviour (see Figure 2). The centrality of Behavioural Intention questions the classical model of Belief, Attitude, Behaviour (Conner & Sparks, 1995).

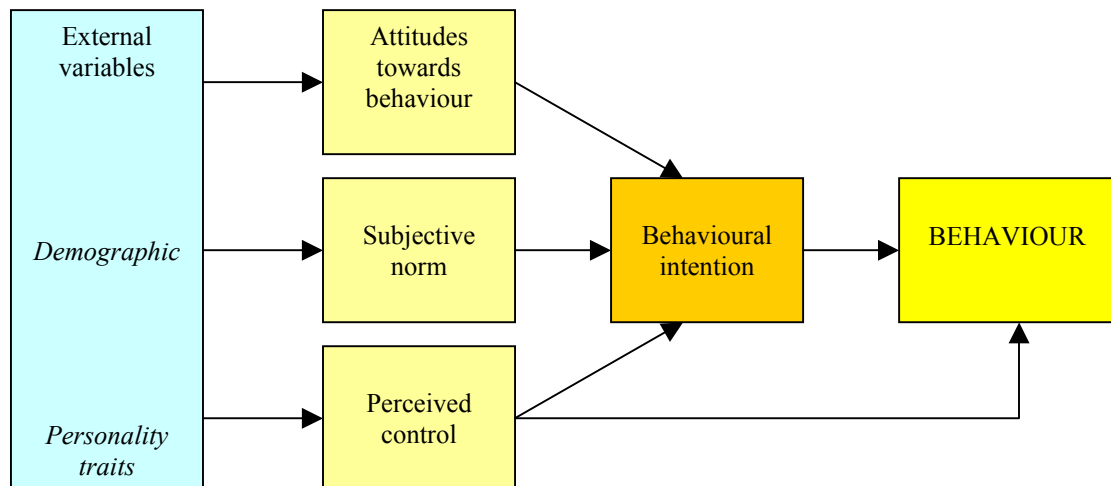


Figure 2: Theory of Planned Behaviour, following Conner & Sparks, 1995

In the TPB, Behavioural Intention is determined by:

- Attitudes towards behaviour, determined by the belief that a specific behaviour will have a concrete consequence and the evaluation or valorisation of this consequence.
- Subjective norms, or the belief in whether other relevant persons will approve one's behaviour, plus the personal motivation to fulfil with the expectations of others.
- Perceived behavioural control, determined by the belief about access to the resources needed in order to act successfully, plus the perceived success of these resources (information, abilities, skills, dependence or independence from others, barriers, opportunities etc.)
- Socio-demographic variables and personality traits which condition attitudes, subjective norms and perceived behavioural control. These are the same as in the HBM.

An outstanding aspect of the TPB is the central role of social network support. Health promotion among sex workers, with the collaboration of committed sex workers who were trained to distribute information and to offer support to their colleagues, provided positive results in a South African mining community (Campbell & Mzaidume, 2001). Similarly, the support of friends and partners has

been central for South African adolescents to attend STD clinics (Meyer-Weitz *et al.*, 2000a). Another key factor emphasised in the TPB is the encouragement of feelings of self-control. In order to promote HIV/AIDS preventive measures, Meyer-Weitz and her colleagues (2000b) used a TPB approach in order to stimulate feelings of control and self-efficacy in negotiating with partners or clients to use condoms.

The advantages of the TPB are clearly the taking into account of motivational aspects of personal disease control and the influence of social networks and peer pressure. The examples above show how projects can take advantage of these factors, rather than limiting themselves to the transmission of knowledge messages. Unfortunately, the TPB approach has scarcely been used outside STDs/AIDS research.

The limitations are a potential overemphasis on these psychological factors, while under-valuing structural factors like limited access or availability of resources.

### c) *The Health Care Utilisation Model*

The socio-behavioural or Andersen model (Andersen & Newman, 1973) groups in a logic sequence three clusters or categories of factors (*predisposing*, *enabling* and *need* factors) which can influence health behaviour. The model was specifically developed to investigate the use of biomedical health services. Later versions have extended the model to include other health care sectors, i.e. traditional medicine and domestic treatments (see Weller *et al.* 1997). Figure 3 outlines the different categories. An adaptation of the model has been proposed for studying health-seeking behaviour for malaria (Rauyajin, 1991).

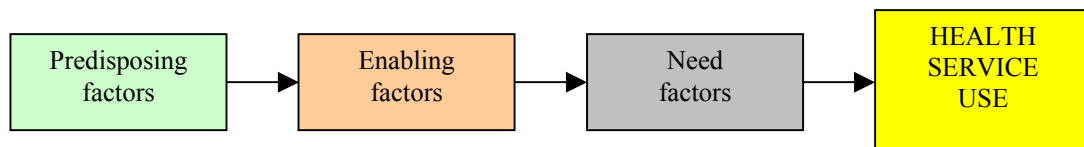


Figure 3: Health Care Utilization Model

Examples of the factors organised in the categories of the Health Care Utilisation Model (mainly following Weller *et al.* 1997) are:

- Predisposing factors: age, gender, religion, global health assessment, prior experiences with illness, formal education, general attitudes towards health services, knowledge about the illness etc.
- Enabling factors: availability of services, financial resources to purchase services, health insurance, social network support etc.
- Need factors: perception of severity, total number of sick days for a reported illness, total number of days in bed, days missed from work or school, help from outside for caring etc.

- Treatment actions: home remedies (herbal, pharmaceuticals), pharmacy, over the counter drugs from shops, injectionists, traditional healers, private medical facilities, public health services etc.

The model centres specifically on treatment selection. It includes both material and structural factors, which are barely taken into account in the social psychology models. Weller and colleagues (1997) emphasised its particular use for working with statistical data on actual cases. The model has also been used for gaining evidence on the weight of different factors for health service use. Based on the data of Demographic and Health Surveys, a comparative study of six African countries has been carried out, using the categories proposed by Andersen (Fosu, 1994).

Andersen's model has been modified in the International Collaborative Study on Health Care (see Kroeger, 1983). In addition to the predisposing factors and enabling factors, this version includes Health Service System factors, referring to the structure of the health care system and its link to a country's social and political macro-system. This is a valuable extension as it puts emphasis on the link of health-seeking behaviour with structural levels within a macro-political and economic context. However, the model omits the 'need factors' which are central for understanding health-seeking behaviour (Weller *et al.*, 1997).

A further variant of Andersen's model was elaborated by Kroeger (1983). Based on a extensive and well-elaborated literature revision, he proposed the following framework (see figure 4):

- Interrelated explanatory variables, all of which are affected by perceived morbidity.
  - An individual's traits or predisposing factors: age, sex, marital status, status in the household, household size, ethnic group, degree of cultural adaptation, formal education, occupation, assets (land, livestock, cash, income), social network interactions.
  - Characteristics of the disorder and their perception: chronic or acute, severe or trivial, aetiological model, expected benefits or treatment (modern versus traditional), psychosomatic versus somatic disorders.
  - Characteristics of the service (health service system factors and enabling factors): accessibility, appeal (opinions and attitudes towards traditional and modern healers), acceptability, quality, communication, costs.

The interaction of these factors guide the election of health care resources (dependent variables).

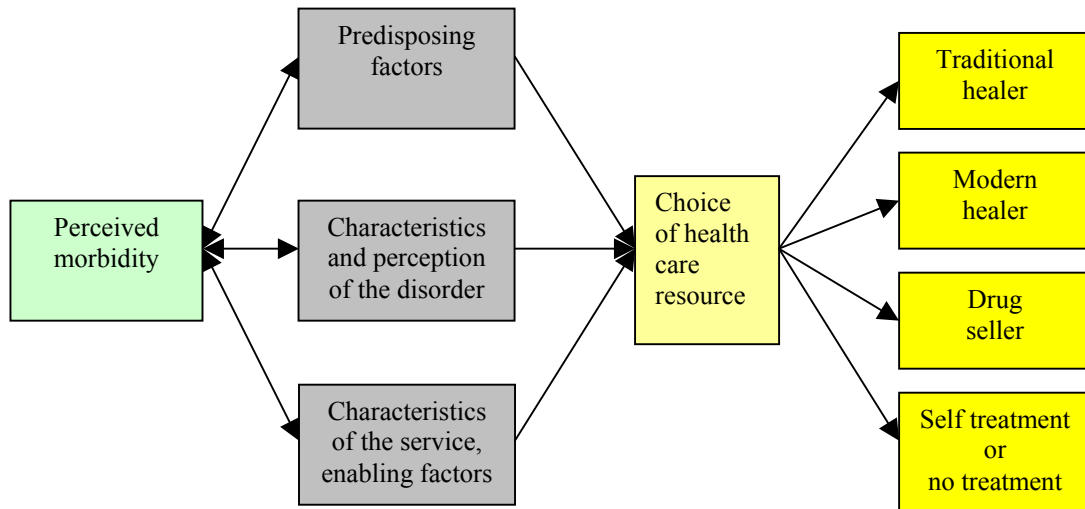


Figure 4: Kroeger's Model, 1983.

The advantage of socio-behavioural models is the variety of the factors which are organised in categories, making interventions on therapeutic actions (or lack of actions) feasible. They permit the establishment of correlations with good predictability, but not specification of how and why the different factors affect therapeutic selection (Weller et al. 1997).

#### d) *The "four As"*

It has become popular among researchers to use different categories which group key factors for health-seeking behaviour. The best known is the grouping into the "four As":

- Availability: refers to the geographic distribution of health facilities, pharmaceutical products etc.
- Accessibility: includes transport, roads, etc.
- Affordability: includes treatment costs for the individual, household or family. A distinction is made between direct, indirect and opportunity costs.
- Acceptability: relates to cultural and social distance. This mainly refers to the characteristics of the health providers – health workers' behaviour, gender aspects (non acceptance of being treated by the opposite sex, in particular women who refuse to be seen by male nurses/doctors), excessive bureaucracy etc.

The 'model' of the "four As" has been widely used by medical geographers, anthropologists and epidemiologists who mainly emphasised distance (both social and geographical) and economic aspects as key factors for access to treatment (e.g. Good, 1987).

The advantage of the "four As" is the easy identification of key potential 'barriers' for adequate treatment.

#### e) *Pathway models*

Starting with recognition of symptoms, they centre on the path that people follow until they use different health services (home treatment, traditional healer, biomedical facility).

Figure 5 shows an example of a pathway model (Good 1987), which stresses the importance of ‘significant others’ and the decision-making process.

‘Significant others’ are part of the ‘therapy managing group’, a concept elaborated by Janzen (1978) which is key for understanding decision making in therapeutic processes. This idea challenges the strong emphasis on the individual and stresses the pivotal role of extended groups of relatives and friends in illness negotiation and management. In the course of the illness episode, the involvement of support groups in illness management can successively change. Pathway models acknowledge these dynamics of illness and decision-making.

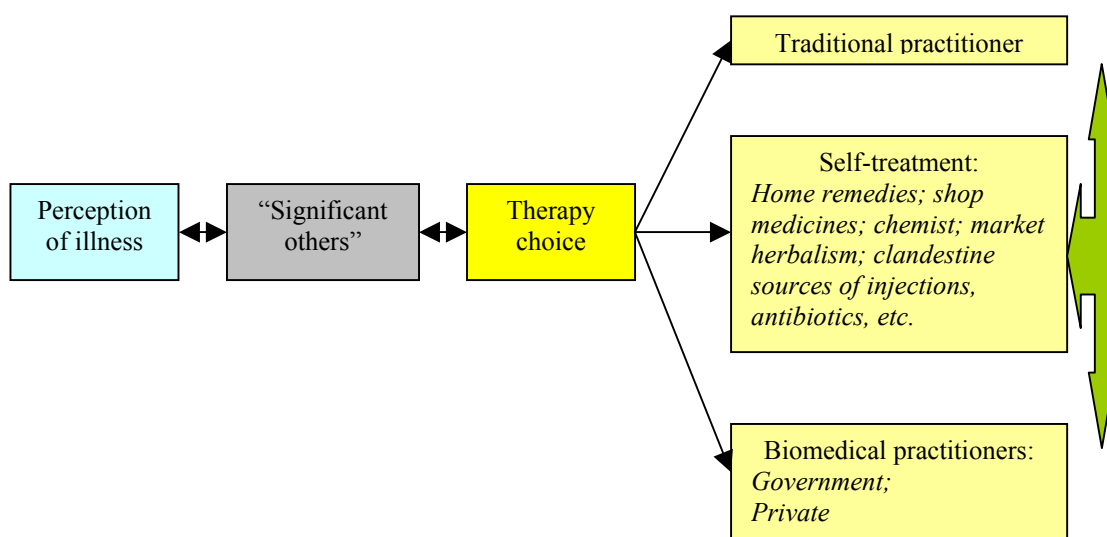


Figure 5: Good's Model, 1987. The green arrow indicates that people can move from one sector to another.

Most of the studies which use pathway models investigate the path until the first contact with a health facility. More recently, there has been an increasing emphasis on successive therapy choices. Nyamongo (2002) elaborated a descriptive model (see Figure 6) which includes treatment sequences for malaria in a Kenyan community, taking into consideration different factors (e.g. duration of illness, knowledge) and logics (e.g. minimising expenditure) which determine therapy choice and switching from one modality to another.

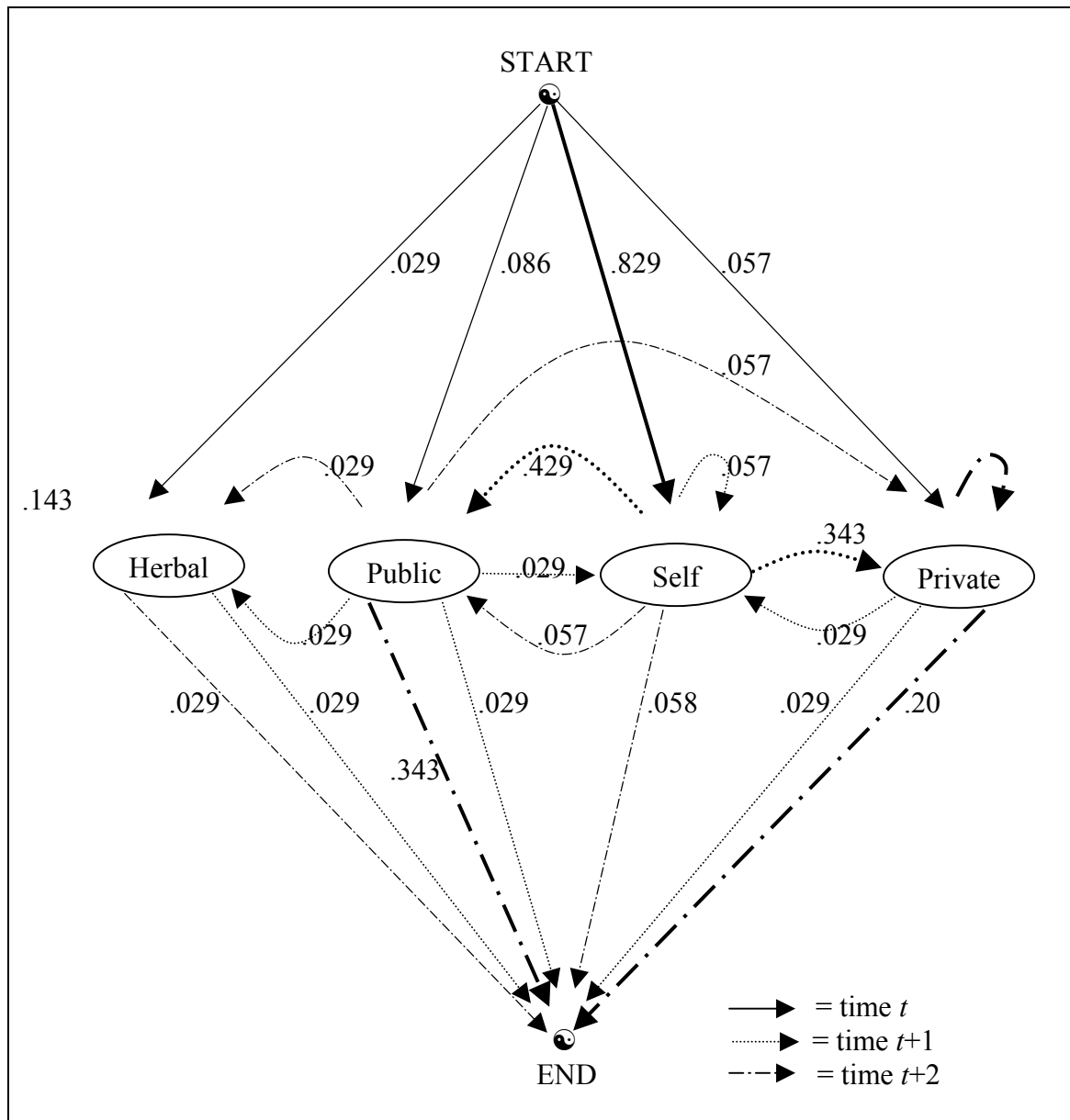


Figure 6: Likely movements between treatments with the likelihood estimates (N=35, arrows in bold indicate higher probabilities) (from Nyamongo 2002)

The strength of pathway models is that they depict health seeking as a dynamic *process*. Factors are sequentially organized, according to the different key *steps* (i.e. recognition of symptoms, decision making, medical encounter, evaluation of outcomes, re-interpretation of illness) which determine the course of the therapy path.



f) *Ethnographic decision-making models*

Ethnographic decision-making models attempt to predict health-seeking behaviour. The methodology they use in order to identify key factors involved in therapy choice follows several steps. In a first ethnographic assessment, the key factors as pointed out by the community are enquired. Combining these factors, the researcher creates different hypothetical scenarios or vignettes. A typical vignette would be: If illness is perceived as serious, and you have economic resources, what would you do? These vignettes are then presented to interviewees, and answers are quantified in percentages. Finally, a series of rules is elaborated, for example: “if a family has money and a severe illness they would consult a doctor” (Weller *et al.* 1997). In order to test the predictability of the decision-making model, data are compared with actual cases.

Young and Garro, working in Pichátaro, Mexico, described four key criteria relevant for treatment choice mentioned by the communities: (1) gravity of the illness, (2) whether an appropriate home remedy is known for the illness, (3) faith or confidence in the effectiveness of home remedies for a given illness, and (4) expense of treatment and the availability of resources (Garro, 1998). Similarly, Weller and colleagues (1997) found (1) severity of illness, (2) economic resources and (3) prior experiences with an illness as the main criteria for treatment choice in a Guatemalan community.

In general the capacity for prediction of the decision-making models was found to be high: 88% better than chance in the study by Young (1981); 51% better than chance in the study by Mathews and Hill (1990); 62% better than chance in the study by Ryan & Martínez (1996). Only the study by Weller and colleagues (1997) reports a low predictability (7-9% better than chance) – the conclusion was that the decision-making model provided less accurate data compared to Andersen’s model of health care utilisation for predicting behaviour.

An important advantage of the decision-making studies is that the rules permit us to infer basic logics which guide the therapeutic selection. The central idea is that persons follow predefined patterns (do not act randomly), both in their first therapeutic selections and when they move from one treatment modality to the next (Garro, 1998; Ryan, 1998). According to Garro (1998), two general principles enable us to understand therapy choice in Pichátaro: (1) for non-severe illnesses, actions are cost-oriented. People start with less costly treatments (home treatment) and only opt for more costly alternatives if the first treatments fail or if they do not know the treatment for the problem; (2) for illnesses considered serious, illness costs are secondary, and treatment selection primarily depends on “probability of cure”, and normally persons opt for a physician.

In his study in rural Cameroon, Ryan (1998) studies the behavioural patterns which lead to a sequential use of different medical alternatives, in order to search for underlying organisational principles. Departing from a series of general observations, he elaborated a *model of home case management for acute illnesses*, on three basic tenets:

(1) Laypeople minimize uncertainty by identifying illness types that require particular health actions and by delaying action. According to Ryan, waiting is a key strategy of people, because it permits them to observe the evolution of illness in terms of severity and of better identification. Ryan emphasises the state of

uncertainty which accompanies illness processes, especially, but not exclusively, in their beginnings. On the other hand, Nyamongo (2002), working in Kenya, found that for common illnesses, which people recognise well, waiting seems not to their strategy.

(2) Laypeople minimize the cost of care by choosing treatments that are less expensive and easier to administer or by reducing the number of treatments tried. This logic explains why the majority of treatments are initiated in the home.

(3) Laypeople maximize treatment variety in the hopes of finding at least one treatment that helps stop the illness.

### **Critiques of Health-Seeking Behaviour Models**

- (1) The studies about health-seeking behaviour centre on the characteristics of the implied persons for explaining, from an applied Public Health perspective, reasons for delay in receiving adequate treatment, non-compliance with treatment, or non-utilisation of preventive measures. Few models take into consideration health provider factors. The impact of social relations from the perspective of health providers is extensively treated in the background paper (Blaauw, see DCPD background paper).

Centring on the personal characteristics tends to 'blame the victim', showing the individuals themselves as responsible for inadequate health-seeking behaviour. In general, they overestimate the capacity for an individual to choose and follow behaviour which is considered adequately.

- (2) In most cases, health-seeking behaviour models depart from the assumption that individuals generally aim to maximise utility and thus prefer behaviours which are associated with the highest expected benefits. This is, however, a very utilitarian vision which does not necessarily correspond to reality (Sahlins, 1976; Good, 1994). Emotional aspects and non-rational behaviour which influence strongly health-seeking behaviour are much less considered. Decision-making issues are also manifestations of power relations which encompass interests in conflict that go beyond the strict ambit of health. Actions contain also a symbolic value, and much of behaviour is determined by political and politicised discourses. Peer pressure factors and social relations of the Theory of Planned Behaviour to a certain extent consider these points, but they commonly understate the social forces from a more historical perspective.
- (3) More explicitly, the behavioural models attempt to identify key factors, and their weight in behaviour. Key factors can, however, not be isolated from the context in which they occur. Sauerborn *et al.* (1996) for example showed how perception of illness severity changed with seasonality, related with climatic conditions and work load. The re-interpretation of malaria in terms of witchcraft (Hausmann-Muela *et al.*, 1998) was found to depend much on both the perceived failure of biomedical treatment and the social conflicts in which a person or family is involved.

## **6. Gender inequalities and health-seeking behaviour**

Studies in gender and health-seeking behaviour mainly centre on the differences in access to health care between men and women due to gender inequalities. To a higher or lesser extent, inequalities exist in all societies and social classes, but in developing countries and among the poor, they are assumed to have more negative impact on women's health.

The effects of gender inequalities can be clearly seen when access of women to both preventive and therapeutic measures is significantly lower compared to men. For example, different studies show an increased number of male patients who attend medical services in areas where disease rates are practically the same for both sexes (see WHO, 1997; Nash Ojanuga & Gilbert, 1992). In general inequality in access is associated with the finding that women have to overcome more obstacles to reach treatment. Another expression of sexism is the unequal treatment women receive from health personnel.

In some cases, the health providers attend to men and boys better than women and girls (Nash Ojanuga & Gilbert, 1992). This behaviour is the extreme consequence of sexism among many physicians who tend to treat women's problems as less important – with the exception of reproductive health, an area which is increasingly medicalised. The often disrespectful treatment and the poor quality of information which women receive lead both to poor comprehension of actions to take (WHO, 1997) and to unsatisfied women who increasingly abstain from health services (Vlassoff, 1994).

The Technical Paper on Gender and Health (WHO, 1997) proposes a series of further factors which need to be taken into account in health-seeking behaviour studies as well as in elaborating gender sensitive health system responses. On the whole, women have, compared to men, limited access to cash money which is needed for coping with illness costs. This applies particularly to remunerated work. As a basic division of labour, Bonilla & Rodriguez (1993) pointed out that women are mainly engaged in the private sphere while men work in the public sphere. Decisions which economically affect the household lie with the breadwinner who is mostly male, making women dependent on men for accessing health services for themselves and their children. Several studies (Mwenesi, 1993; UNICEF, 1990; Vlassoff *et al.* 1995) pointed to the paradox that while women as the main caretakers are the first in perceiving illness in their children, they often lack the means to adequately act because they depend on the men who control funds.

The power position of men has also important implications in the prevention of HIV/AIDS and other STDs. Even though women are aware about the mechanisms of infection and the severity of illness, to negotiate about condom use is often difficult. To insist on condom use can be interpreted as a lack of trust by women in their partners or a questioning of their behaviour. The anxiety about being abandoned, when this puts their survival in danger, increases risky practices.

Emphasis has also been placed on the nature of women's work and its impact on access to treatment. The triple burden of household chores, childcare and agricultural work limits time for women to attend health care facilities, which often implies long travelling and waiting times. Added to this is the limited access to transportation, for example bicycles or costly public transport.

Social values reinforce inequalities, by sanctioning that women have to place the well-being of their family over their own health. It has been discussed as to whether targeting

health messages to women does not increase the burden of their responsibility (WHO, 1997).

Nash Ojanuga & Gilbert (1992) systematised the obstacles which women face into four categories:

- Institutional barriers: unequal treatment by health providers
- Economic barriers: different access to resources
- Cultural barriers: social status of women which situates them in socially inferior positions, male doctors who attend women with sensitive health problems, etc.
- Education barriers: women having less access to education (e.g. seen in literacy rates).

In the specific field of malaria, Tanner & Vlassoff (1998) proposed a detailed systematisation, based on empiric evidence, of the increased risk factors in women compared to men for not receiving effective treatment:

- Personal factors: knowledge and beliefs about illness, user/provider relationship
- Social and reproductive activities: roles in health at household level, decision-making at household and community level, use of services, quality of received health services, social stigma
- Economic/productive activities: division of labour, substitution of labour, exposure to infection, opportunity costs, economic policies in relation to accessibility of services/care, availability of cash.

While nearly all studies focus on how gender inequalities negatively affect women's health, some investigate also the situation of men. It has been pointed out that men not only have often higher labour risks than women, but also that certain risk behaviours are socially valued, denoting 'virility' (Doyal, 2000).

On the other hand, not being able to overtly show pain or emotions, such as fear about an illness, hinders men from feeling psychological relief as well as manifesting it in the medical encounter. Other typical problems are that men attend doctors late so as not show their weaknesses, or do not comply with health advice that implies a change in habits if they are considered 'feminised' (Doyal, 2000).

The studies on gender, implicitly or explicitly, depart from the idea that health behaviour not only depends on a person's knowledge, will and capacity, but also on the position which they occupy in society. The same applies to the studies on poverty, inequalities by social class and vulnerability.

## **7. Poverty, inequalities by social class and vulnerability**

The basic concepts of this section are greatly dealt with and brilliantly documented in the DCPD background paper by Russell ("The economic burden of illness for households"). Here, we focus only on some aspects which are relevant for health-seeking behaviour.

Direct and indirect treatment costs are among the most commonly mentioned obstacles to adequate health-seeking behaviour of the poor for obtaining prompt and adequate treatment, treatment compliance and access to preventive measures like mosquito-nets

(for a review see Worrall, *et al.*, 2003). Even if direct costs are affordable, or if medical services are free, indirect costs (for transport, special food, ‘under-the-counter’ fees) can limit access to treatment or lead patients to interrupt therapies (Abel-Smith & Rawal, 1992; see Russell for a comparison of direct and indirect costs of illness). The data of ten Sub-Saharan African countries showed differences in antimalarial treatments by socio-economic status (SES) (Wardlaw, 2003, cited by Worrall, *et al.*, 2003), which favoured the highest quartiles of SES groups. But even in a survey carried out in a rural poor society of South-eastern Tanzania, where SES seemed irrelevant, persons of the relatively higher SES knew more danger signs and were more likely to bring their sick children to a health facility than those who were relatively poorer (Schellenberg *et al.*, 2003). Treatment costs are not only an obstacle for adequate health-seeking of the poor; they also signify a higher burden for the poorer households compared to the more affluent. Even if the poor spend less or equal amounts on coping with illness, the percentage of the monthly or annual income is higher among the poor.

The impact of health-seeking processes on the household economies of the poor is clearly shown with tuberculosis and AIDS (including costs for funerals, see Russell). Similar negative impacts are observed also for illnesses which in principle are less costly, but where households can be faced with several episodes at a certain time of the year, particularly before the harvests when work load on the fields is intensive, when little money is available, and when coping strategies are most difficult to activate (Hausmann-Muela, 2000).

The resource-seeking processes for health have not necessarily the same impact in all households with a similar poverty profile. To a great extent, health-seeking of households depends on their capacity and possibility at a specific moment to mobilise resources, both in material and social or symbolic terms. This is the nuclear idea in the definition of vulnerability as proposed by Chambers (1995:vii): “Vulnerability means not lack or want, but exposure and defencelessness. It has two sides: the external side of exposure to shocks, stress and risk; and the internal side of defencelessness, meaning a lack of means to cope without damaging loss”.

Coping strategies occupy a central position in the intersection between vulnerability processes and health-seeking behaviour. They are punctual strategies in order to overcome concrete crises at specific moments (although they are often activated with delay). Coping strategies usually include occasional work, child work, borrowing money, theft, sales of food stores and productive assets etc. (see for example Sauerborn, 1996). In the analysis of coping strategies, it is important to include not only tangible but also intangible stores or claims which can feasibly be activated in asking for support from other family members, other households, patrons, the government, etc. (Swift, 1989). Coping strategies are different from long-term strategies adopted for responding to production crises and risks, mainly in agriculture (price falls, drought), which include production diversification, support networks and insurance.

Figure 7 illustrates how health-seeking processes are integrated in processes of vulnerability. Lack of resources hamper adequate treatment, and favour development of parasite resistance, illness recrudescence and prolongation, which ultimately increases direct, indirect and opportunity costs. Long duration or concentration of illness episodes in a household can lead to selling of all available assets and other coping strategies (e.g. borrowing money), pushing the household into the vulnerability spiral. Illness can end up being extremely costly for the poor (Corbett, 1989). In general, the economic burden of illness can have a double impact on poor households. Firstly, it can have an impact on health if individuals see themselves forced to interrupt treatment because of lack of

cash, leading to increased vulnerability in terms of health. And secondly, when coping strategies lead to a process of impoverishment, a household is placed in a position of vulnerability in terms of material survival. In the worst case, both processes mutually reinforce each other, generating a spiral of double vulnerability.

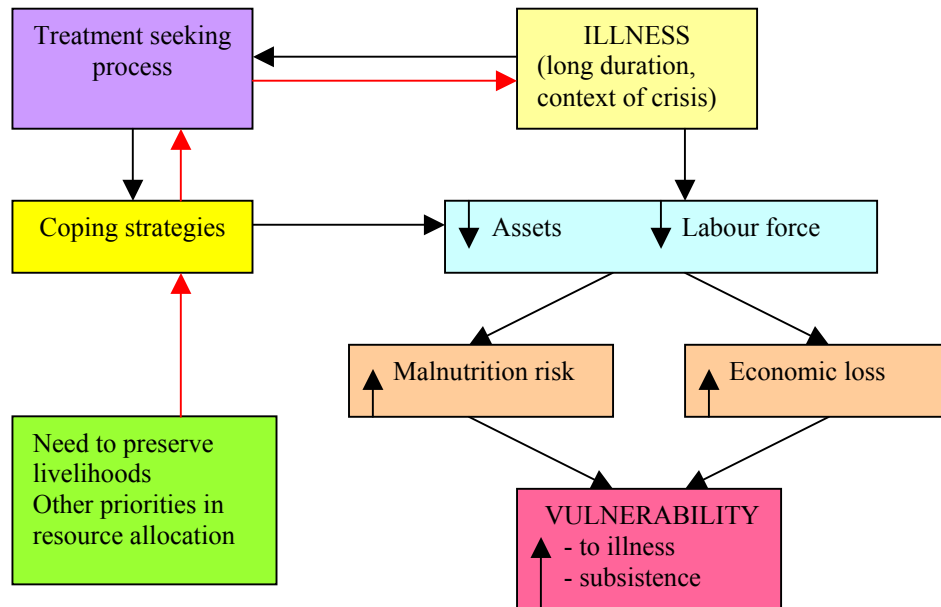


Fig. 7 shows the spiral of vulnerability. The red arrow represents tendencies that limit the coping strategies, therefore affecting the therapy path and eventually the illness course.

Pryer (1989) shows the tragic consequences of the vulnerability spiral. From her study in a suburb of Khulna, Bangladesh, focusing on households where the breadwinner falls ill of a long-term illness, she concluded. (1) The degree of dependence was less in these households due to the fact that children and women worked four times more compared to other households. (2) Livelihoods were sold to richer households or businesses in order to buy medication. When nothing remained to sell, the intake of medication was reduced in line with the small amounts of money available, and treatment was completed less often. Expenditure to treat illness was up to 11 times higher than the cost of medication. (3) Illness increased considerably depending on the degree of poverty in the households of the third and fourth quartile. The most frequent coping strategies were: loans, neighbours support, decreased food consumption, collection of wild food, begging or scavenging and participation of women and children in the labour force. Many of the households became extremely indebted. In these households, the number of malnourished persons (not only children) increased and childcare decreased because of the excess work of the mothers, thereby increasing the children's vulnerability for illness. The social and health-related inequalities seem to be mutually reinforced in a spiral of connected causalities.

## 8. Contextualisation

Behaviours cannot be deduced from one or various isolated factors. For example, a certain practice can be correlated with an aetiology, but in the illness models,

aetiologies often have moral implications that give meaning to behaviour. To identify key factors relevant for the health-seeking process is helpful for planning health policy interventions. But in order to correctly understand behaviours, these factors need to be contextualised. This is one of the principal inputs from vulnerability studies. In this sense, the causal structure of famine is graphically represented by Watts & Bohle (1993) in a triangle, whose angles are “entitlement” (capacity in economic terms), “empowerment” (capacity in political terms) and “political economy”. The area of interlinkage of these three dimensions is the vulnerability space.

Kalipeni (2000) challenges the classical focus in HIV/AIDS as a cultural/behavioural structure, showing how sexual practices are conditioned by the economic crisis, the deterioration of the health system (both exacerbated by structural adjustment policy) and situations of social crisis (war and political instability), which increased poverty and class and gender inequalities. This perspective does not imply a shift from “free selection” to structural or material determinism, but rather that choices and behaviours must be analysed in their political, social and cultural framework (Garro, 1998).

Ideally, a contextualised analysis of health behaviours should (1) be necessarily interdisciplinary, combining ‘natural sciences’ with ‘social sciences’ approaches; (2) not fail to consider that the studied ‘contexts’ are part of a historical process; (3) combine ‘micro’ with ‘macro’ levels; and (4) triangulate qualitative and quantitative investigation techniques.

## **Part II: Interventions and policy making**

Health-care-seeking behaviour studies range across many different health care programmes – from malaria studies to reproductive health. These studies are important because they provide relevant information on what patients, or caretakers, do when faced with a health problem. The primary question is, to what extent have health-seeking behaviour studies been useful in determining the type of intervention programmes that can be put in place to alleviate the myriad of health problems?

### **1. IEC campaigns**

An important component of any health intervention programme must deal with providing information to users, educating the users and channelling the information in a manner which is acceptable to the users. Information, education and communication (IEC) campaigns combine strategies, approaches and methods that enable individuals, families, groups, organisations and communities to play active roles in achieving, protecting and sustaining their own health. Within IEC, the process of learning that empowers people to make decisions, modify behaviours and change social conditions is embodied. The activities are developed based upon needs assessments, sound educational principles, and periodic evaluation using a clear set of goals and objectives. These activities are developed and implemented within the broader objectives of the activities. Thus if the activity is to improve reproductive health, IEC programmes should take into account all the aspects of reproductive health rather than focusing on a particular component. The influence of underlying social, cultural, economic and environmental conditions on health should also be taken into consideration in the IEC processes.

Information is communicated through many channels including face-to-face (interpersonal) communication, mass media such as radio and television, drama, folk theatre, etc. These channels have been used to communicate information on malaria, HIV/AIDS, female genital mutilation, improving water and sanitation (e.g. in Guinea Bissau and Mali) and other aspects of health (UNHCR, 1999). For example, the shop keeper training programmes in coastal Kenya have used community folk theatre as a way of passing to the community messages on malaria prevention. Similarly these approaches have been used to communicate information on behaviour change so as to minimize the risk of contracting HIV.

Good communication between users and providers of any service is essential. It is especially important when providing reproductive health services, given the sensitive nature of some of the issues that are addressed (such as sexual violence, female genital mutilation, and providing contraceptives to adolescents). Accordingly, IEC approaches must be carefully and appropriately designed and selected. We should take note of the fact that IEC programmes should eventually bring about behaviour change. However, increased knowledge is not necessarily a sufficient cause for behaviour change.

## **2. Improving home treatment practices**

Kleinman (1980) stressed that most decisions about health care and treatments occur in what he called the popular sector – as differentiated from the ‘folk’ and the professional sectors. Numerous studies have documented the importance of home treatments. Ryan (1995) found that in a Kom village of Cameroon, 83% of the illnesses were treated at home, with 22.5% of the 454 illness episodes seeking treatment outside the home. Kroeger (1983) reported that 80% of illnesses are managed within the household, further pointing to the importance of looking at the home as a major player in the management of health problems. In Guatemala, Weller and colleagues (1997) have shown that up to 90% of the initial treatment actions take place at home and they may involve use of home remedies or remedies obtained from a pharmacy. Of the remaining 10%, 8% of the initial actions involved seeing a physician or a nurse while about 2% of the people visited a folk healer. The importance of home treatment with a particular emphasis on malaria has been shown in a variety of studies (e.g. Foster, 1995; Hamel *et al.*, 2001; Nyamongo 2002). In developing countries, constrained access to health care facilities reinforces the need to focus on local solutions in the management of illnesses. Particularly in the field of malaria, interventions have been designed to improve access to drugs and treatment compliance.

### *a) Pre-packaging of drugs*

Unfortunately, in the majority of self-treatment options, compliance with drug regimens is always a problem. Often, patients take sub-curative doses, contributing to the problem of developing drug resistance. A baseline survey in Kilifi, Kenya (Marsh *et al.* 1999) revealed that only 4% of child patients given self-administered shop-bought anti-malarial drugs (in this case chloroquine) received an adequate dose for malaria, while in rural western Kenya, only 12% of the patients were correctly treated (Ruebush *et al.*, 1995).



In order to improve drug use, several interventions using pre-packaged drugs have been carried out. Using blister packages with pre-packaged malaria drug regimens for different ages, combined with easily understandable and locally adapted administration instructions, evaluation studies have found encouraging results with regard to improving correct drug use (Pagnoni *et al.*, 1997; Ansah *et al.*, 2001; Okonkwo *et al.*, 2001).

*b) Shop keeper training*

An innovative approach to improve correct drug use is the shop keeper training programme in Coastal Kenya, a local solution with far reaching policy and programmatic implications. By training shop keepers who stock the drugs that are widely used by lay people, it has helped to reduce the use of sub-curative doses (Marsh *et al.*, 1999). The provision of drugs by shops makes use of an already established infrastructure that functions according to supply and demand. It has advantages for both providers and clients. For the shop keeper, the sale of drugs forms part of income generation. For the client, purchasing drugs from a shop is very convenient. What the client esteems, as Marsh and colleagues pointed out, is: the quick and friendly service; the proximity to home; the long opening hours; the ability to send a messenger to purchase the drugs; the ability to choose affordable drugs; and the possibility to buy drugs on credit. In fact, shop keeper education has been shown to help significantly reduce inappropriate use of drugs.

*c) Training community health workers for malaria control*

Use of community-based programmes for malaria control is a common approach in many endemic countries, which started some years after the Alma Ata Declaration on Primary Health Care (PHC) in 1978. In most cases, the existing structure of village or community health workers (VHWs or CHWs) was used for integrating malaria control into PHC services (Moir *et al.* 1985; Menon *et al.*, 1990; Ghebreyesus *et al.* 1996; Pagnoni *et al.*, 1997). All projects, however, reported that the use of CHWs was problematic because the health workers were often not present, poorly motivated and/or not accepted by the community, and therefore largely ineffective. In a WHO publication, Khassay and colleagues (1998) critically revise the reasons for the common failure of the majority of CHWs programmes and provide some suggestions of how to improve the programmes.

A different approach was chosen by Delacollette and colleagues (1996) in their study in rural Zaire, where community health workers were specifically recruited and trained for malaria treatment *only*. Also this study reported similar problems in relation to the use of CHWs, which were mainly related to the ambiguous position of the CHWs as “a makeshift liaison between the health care system and the community” (p.429).

The idea of “malaria workers” is well established in Latin America and Thailand. Their success has been related to the continuing support of the national health authorities as well as of the community (Okanurak *et al.* 1996). Ruebush and Godoy (1992) described in detail how malaria community workers were selected, trained and supervised in Guatemala. The complex system of motivation and control, established over a period of 30 years, shows how delicate it is to create and sustain a network of malaria workers.

The recent study by Kidane and Morrow (2000) is the most extreme approach of a “malaria worker network” with regard to closeness to the community. Their approach

included the training of “malaria workers” – or mother co-ordinators, as they call them – nearly down to the household level, where each mother co-ordinator, provided with antimalarial drugs, was responsible for about 20 households. Besides that malaria workers were necessarily female, one of the interesting aspects of this approach was the combination of bringing education of mothers *and* antimalarial drugs to the household.

### **3. Collaboration with traditional healers**

The role played by traditional healers cannot be over-emphasised. In rural Africa, medical doctors are outnumbered by traditional healers. Furthermore, the traditional healers are located in places where the community has easy access. This makes them popular and readily relied on by communities (Abdool Karim *et al.*, 1994). Similarly, traditional birth attendants (TBAs) are popular with women for whom access to health care facilities is beyond their financial ability.

The influence of traditional healers is not limited to rural areas alone. Indeed, in urban areas, traditional healers have a compelling presence. The twin problem of HIV/AIDS and tuberculosis has pulled traditional healers into the eye of the storm. Traditional healers are actively involved in the management of TB where patients are increasingly turning to indigenous medication in their attempt to come to terms with the disease. Thus traditional healers have a potentially important role to play in the delivery of health care, above all in resource poor areas.

Currently, traditional medicine is one of the most ambiguous and controversial topics in the ambit of national and international agencies involved in the development of Primary Health Care in developing countries. As a medical recourse utilised by the population, its interest as a study object is unquestionable, but its position in the design of health planning is a constant motive for polemic among experts. Although without outstanding results, the World Health Organization has promoted since 1978 (WHO, 1978; Akerele, 1984; WHO, 1991; WHO, 1995; WHO, 1996; WHO, 2002) a search for strategies which, at least, make possible a certain collaboration between the generically called ‘traditional healers’ and health professionals linked to biomedical institutions.

The major objective made explicit in the WHO Traditional Medicine Program (TMP) has always been to facilitate the maximum health care coverage, culturally acceptable for the community, but organised by the official medical institutions. WHO suggested that traditional medicines, adequately used, can help to construct a health system which is both efficacious and accessible for the precarious economies of the implied states (1978:14). From an operational point of view, the TMP justifies its policy by the scarcity of medical services, above all in the rural zones.

Collaboration with traditional healers has mainly focused on training Traditional Birth Attendants and training of traditional healers as community health workers (WHO, 1991; Khassay *et al.*, 1998). A collaboration with traditional healers for referring patients with severe malaria has been proposed by Makemba *et al.* (1996). An extensive literature review by UNAIDS (King, 2000) reported about collaboration projects with traditional healers for HIV/AIDS in eight Sub-Saharan countries. One of the most important lessons learned was that collaboration was not only possible, but that it had yielded valuable public health benefits.

### **4. Social marketing**

Studies on malaria prevention have shown that proper use of mosquito nets can significantly reduce infant mortality. The benefit of sleeping under a mosquito net is further enhanced through the treatment of the nets with insecticides. Thus increasing access to treated nets is key in the reduction of malaria related deaths. Proper use of ITNs leads to a reduction in the level of malaria, particularly in the under-five-year olds (e.g. Le Goff *et al.*, 1992 – Cameroon; Alsono *et al.*, 1993 – The Gambia; Neville *et al.*, 1996 – Kenya; Rashed *et al.*, 2000 – Benin). For example, in The Gambia, ITN use resulted in a 60% reduction in infant mortality, and episodes of fever associated with malaria parasitaemia were reduced by 45% among children who slept under treated nets. Further, additional use of chemoprophylaxis provided added protection against clinical attacks of malaria (Alonso *et al.*, 1993). This was in an area considered a low malaria transmission region. While in Kilifi, coastal Kenya, an area that has year-round stable malaria transmission, a large scale randomised trial showed that use of ITNs led to a 33% reduction in all-cause mortality, a 41% reduction in paediatric admissions and a 44% reduction in severe malaria morbidity (Neville *et al.*, 1996). More recently, studies from Benin have shown that use of ITNs has the capacity to reduce the risk of febrile episodes by about 34% in children residing in rural areas.

Benefits from behaviour change are not limited to malaria alone but can be extended to reproductive health studies as well. Various methods used in family planning and in the prevention of sexually transmitted infections have shown significant reduction in total fertility rates as well as in the number of sexually transmitted infections. Reduction in the total fertility rate in countries such as Kenya is attributed to increased use of family planning. Condoms have largely been regarded as a stop gap method in family planning. However, there is now increasing recognition of the condom as a method that can be used for dual protection against pregnancy as well as against sexually transmitted infections.

Whether one looks at malaria prevention, prevention of pregnancy or sexually transmitted infections, the delivery of the various health products to the population is important. The manner in which these products are promoted can influence their uptake by communities. Thus various ways to increase the uptake of health products have been tried. They range from free distribution, commercial distribution through to social marketing.

Population Services International (PSI) uses social marketing techniques in pricing and selling of nets, condoms and other family planning methods. These techniques are aimed at making products accessible to the poor who are also more likely to be affected. Coupled with segmentation of the client market, one can achieve higher sales while reaching the widest market at affordable rates. For example, in Malawi, PSI uses segmentation by pricing different products at different prices. In the urban areas, PSI sells a blue conical ITN at a higher price compared to the rectangular ITNs which are preferred in the rural areas. The blue conical ITNs are sold by distributors at 20% above the direct product cost, while in the rural areas, the rectangular ITNs are sold at 55% below the product cost (PSI, 2003). This same strategy has been used successfully in marketing condoms and other reproductive health products. It is apparent from studies that social marketing has an important role to play in availing health products to communities. In the area of malaria, in the KINET project in Tanzania, Schellenberg *et al.* (2001) have concluded that social marketing has great potential in the effective management of malaria control in rural settings. Currently, a social marketing approach for distributing access to antimalarials is planned for rural Tanzania (Lengeler, personal communication).

## **5. Gender-sensitive approaches**

As accurately pointed out by Doyal (2000), in order to reduce gender inequalities, equity in access to care needs to be reinforced, which implies the development of specific and distinctive strategies for men and women, based in a previous identification of both health needs and constraints. Sometimes, the solutions are relatively simple: increasing female staff in order to treat sensitive issues, where confidentiality is important (Vlassoff & García Moreno, 2002); providing mobile services when mobility of women is an obstacle (WHO, 1997); establishing different lines, one for men and one for women, for the treatment for stigmatised illnesses (Vlassoff & García Moreno, 2002).

The number of health care alternatives for each gender has changed significantly over the past years. The classical approach of Women in Development (WID) emphasised campaigns designed to improve women's health, mainly through education. The more recent approach of Gender and Development (GAD) moves explicitly away from considering women as passive subjects whose life and health circumstances need to be improved towards seeing women as protagonists in the health programmes (WHO, 1997). Of particular interest in the GAD approach is the collaboration with already established women's groups, applying the concept of research action.

As the issue of gender is above all a question of relations between men and women, different authors have stressed the need to establish programmes targeted to both women and men. For example, in a trachoma prevention programme, participation focused on both women and men as the behavioural change to be implemented by women (utilise more water for washing their children) needed to be sanctioned by the men in the community (McCulay *et al.*, 1992). Mwenesi (1993) suggested to also target men in health education campaigns as they are the ones who ultimately decided about the health of their children.

Finally, Vlassoff & García Moreno (2002) suggested the inclusion of gender issues in the formation of health workers, for example in the promotion of workshop guidelines in which health personnel could be sensitised for treating especially poor women.

## **6. Equity and vulnerability**

A vulnerability approach permits the integration of biological as well as politico-social perspectives in health behaviour. As a consequence, the recommendations for an adequate health system response would depart from the basic premise that health implementations should be considered within their context. A vulnerability approach, for example, should not only guarantee equity in access to care for the most vulnerable groups, but also promote health strategies that strengthen communities and are linked to other strategies (e.g. agricultural development, education, etc.). Based on a detailed analysis of the vulnerability chain of Nomadic pastoralists of the Republic of Chad and its micro-politics, Wiese (2002: 376) suggested that "any model of health services for nomadic people can only be efficacious on a long term basis if complementary measures aim at strengthening the different scales of nomadic livelihood systems."

To assure an equitable health policy, Wiese's specific recommendations include, among others, to contemplate wherever a new health facility is established its appropriateness,

in social and ecological terms, for the nomadic life-style; for example, that opportunities for economic exchange are offered; that pasture lands for animals are available; that regional approaches integrating primary health, veterinary services, education and conflict-resolution connected with land-use management are secured; that decentralised health care is organised; that key persons of nomadic groups are trained to identify major health problems and to adequately apply some standard treatments; that fixed health services with basic mobile facilities are established; that conflicts and local micro-politics with regard to nomadic and local communities are considered when health facilities are established; that access to health services prioritises the most vulnerable groups within nomadic communities. He emphasised that it is not necessary to create a completely new health care system, but rather to integrate measures into the already existing system “by making acceptable what is accessible and making accessible what is acceptable” (pp.368).

## Conclusions

Rather than a review of findings from different studies, we have presented diverse approaches to health-seeking behaviour from different theoretical orientations. Two major conclusions can be drawn from our reflections: (1) there is a great richness of how data can be generated by using different approaches; and (2) different approaches have different objectives with regard to the type of data they aim to generate.

The variety in approaches goes against the present trend of simplifying human behaviour. All too often, health-seeking behaviour studies are reduced to assessments of existing local knowledge and practices within a community. All the different factors which are in play for making decisions about actions, ranging from socially sanctioned gender roles to deliberations about economic benefits and influence of peer pressure, reveal how complex health-seeking behaviour in reality is.

Often, health-seeking behaviour studies use elements stemming from different models. While combinations of elements from different models can be interesting, and even lead to advancements in models, the eclectic use of such elements without a theoretical framework cannot be the aim of health-seeking behaviour research. Enumerations of different factors without embedding them into a general concept that does not relate to them logically does not contribute much to understanding behaviour.

The diversity of data that can be generated by different approaches poses the question about which approach should be used when investigating health-seeking behaviour. In our outline, we point to the advantages and limitations of the different approaches. There is, however, no conclusive answer about which approach is best. Choice of approach depends much on the objectives or focus of the study. For example, for rapid assessment of local terminologies, FES studies are a valuable option, while health care utilisation models centre more around obstacles for adequate care. But it also depends on the type of illness one wants to study. Sexually transmitted illnesses and HIV/AIDS are more adequately studied by models which take, for example, social values and peer pressure into account, except one wants to focus solely on local beliefs about the illness.

It is also important to decide on the type of analysis you wish to carry out. A vulnerability approach necessarily centres on structural aspects of the health care and social systems, rather than on the personal motives of individuals to decide about actions. This is of course also an ideological decision of which approach one wants to choose, influenced by the type of intervention to be undertaken. For the design of an

IEC campaign, there is no need to study the structural obstacles which influence health behaviour. They should, however, be taken into account in order to know whether an IEC campaign can really change behaviour, or whether they just add to 'blame the victim' by assuming that informed individuals have the real option to influence their behaviour.

In sum, there are no cook-book instructions for the right approach to choose. Neither is understanding health-seeking behaviour a simple issue of choosing the right methods, qualitative or quantitative. Relevant is the purpose of the study and the framework within which the objectives are studied. We hope that the reflections in this paper provide insights into the richness of health-seeking behaviour research, and that studies are planned and used with a critical eye on the chosen approaches, in order to assess what they can really tell about human behaviour, and where the limitations are.

Such studies need to feed policy formulation so that governments and other health agencies may initiate policies that respond to community needs. Already some interventions such as the shop keeper training programme in Kilifi or the KINET in Tanzania have shown the usefulness of using community-based approaches in tackling the use of sub-curative dosages in the treatment of malaria.

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